

**TESTIMONY OF
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VIRGINIA STATE CORPORATION COMMISSION**

BEFORE THE

**SUBCOMMITTEE ON ENERGY AND AIR QUALITY
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES**

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Mr. Chairman and Members of the Subcommittee,

Good morning. My name is Massoud Tahamtani and I am the Director of the Division of Utility and Railroad Safety for the State Corporation Commission in the Commonwealth of Virginia. Our Division assists our Commissioners in administering safety programs involving pipeline facilities, railroads and underground utility damage prevention. Thank you for inviting me to participate in this important hearing.

This morning, I have been asked to focus on Virginia's underground utility damage prevention program as it relates to pipeline facilities. Over the next few minutes, I hope to share with you how our program has evolved to where it is today and the steps we are taking to ensure its continued effectiveness.

Background

As we all know, in the late 1980's and early 1990's, excavation damage to pipelines across our country increased at an alarming rate. Several of these damages resulted in serious accidents involving deaths, injuries and millions of dollars in damage to properties and the environment.

In order to address this serious threat to Virginia's pipeline system, in 1992 our Commission appointed a task force of stakeholders to conduct a comprehensive review of our damage prevention law and recommend changes that would help significantly reduce excavation damage to our underground facilities. This task force included representatives from operators, excavators, underground facility locators, local and state government as well as the notification centers.

To ensure the success of this task force, the Commission created an environment where, for the first time, all stakeholders were placed on an equal footing so that individual issues would not override our ultimate goal of significantly reducing damages to all underground facilities in Virginia.

In early 1993, the Virginia General Assembly recognized the work of the task force and requested the Commission to submit a report and any recommendations to the Assembly's 1994 Session. The task force's recommendations with minor changes were adopted into law effective January 1, 1995.

Virginia's New Damage Prevention Law

The new law contained a number of key provisions, which can be grouped into the following three categories: Improved communication, Effective enforcement and Effective public education.

Improved Communication

The stakeholders believed that first and foremost, the exchange of timely information between the excavators and operators needed to improve. This was accomplished by having the law require:

- The notification centers operating in Virginia to design and implement a “Positive Response System” to enable operators to efficiently communicate the marking status of their facilities to excavators;
- Excavators to provide an additional notice to the operator(s), through the notification center, when they observed clear evidence of unmarked facilities and wait an additional three hours for operators to mark their facilities;
- The notification centers to re-notify the operators who had failed to respond to the “Positive Response System” 48 hours after the notice of excavation.

These three requirements assisted the stakeholders in Virginia to eliminate the gaps that occurred in their communication and to strengthen the partnership which is critical to a successful damage prevention program.

Effective Enforcement

Just as our founding fathers believed that self government was more effective than any government from afar, the law created a way for the enforcement to come from the stakeholders themselves. Thus, included in our new law was a directive to the Commission to appoint a Damage Prevention Advisory Committee (“Committee”) comprised of expert representatives from operators, excavators, facility locators,

notification centers, local government, Virginia DOT, the Virginia Board for Contractors and the Commission Staff. This Committee was charged with assisting the Commission in furthering Virginia's damage prevention program by reviewing reports of damages and violations and by making enforcement recommendations to the Commission. It was believed that this administrative process would result in a fair and consistent enforcement program without costly legal proceedings.

Effective Public Education

Effective education and training is critical to changing behaviors and impacting results. To better accomplish this, the law required all penalties collected from the enforcement program be kept in a "Special Fund" account to be used for training, education and enforcement. In addition, the law required all operators to assist in the education of the public relative to safe digging practices.

With a new law, on January 1, 1995, we began our enforcement program with voluntary reporting of damages by gas operators. By the end of 1995, only 30 of more than 2,500 damages to pipelines, or 1.2 percent, were reported to the Commission for investigation. Obviously, an effective and meaningful enforcement program could not be carried out by taking actions on only the select few damages which were being reported. As a result, beginning with the 1996 calendar year, we required all our gas operators to report all damages and violations involving their facilities for investigation and possible enforcement actions.

Along with our enforcement program we strongly encouraged broad participation of all stakeholders to help improve Virginia's damage prevention program. The combination of these efforts resulted in a 26.5 percent reduction in gas pipeline damages

by 1998. Meanwhile, several serious pipeline accidents across the nation prompted Congress to take action.

As you know, in 1998, the Transportation Equity Act for the 21st Century (TEA21) was signed into law. Section 6105 of this Act authorized the USDOT to undertake a study to determine which existing practices were most effective in reducing excavation damage to pipelines and other underground facilities. Soon after USDOT's study was released in 1999, we compared our law, rules and practices to all the "Best Practices" contained in that study.

As a result, we began a rule making and in 2001, adopted specific rules to further improve Virginia's damage prevention program. Our comparison also identified 20 issues that could not be addressed through rule making. The Commission again invited stakeholders to serve on a task force to study these issues and recommend resolutions. The recommendations made by this task force resulted in further improvements to our law in 2002. The Commission's Rules and the 2002 amendments to the law addressed a number of very important damage prevention requirements that can be grouped as follows:

Excavators are required to:

- Take reasonable steps to avoid damage during routine and emergency excavations;
- Take nine specific steps when conducting trenchless excavation;
- Conduct pre-excavation site inspections and preserve markings during excavation; and
- Take reasonable care when hand-digging around utility facilities.

Operators are required to:

- Update the notification center's data base any time they place new facilities in operation;
- Maintain accurate records of their active facilities as well as facilities abandoned after July 1, 2002;
- Provide underground utility information to project designers;
- Make all new non-metallic underground lines locatable; and
- Place underground utility lines at specific depths.

Notification Centers are required to:

- Include non-operators on the center's board; and
- Meet certain performance standards.

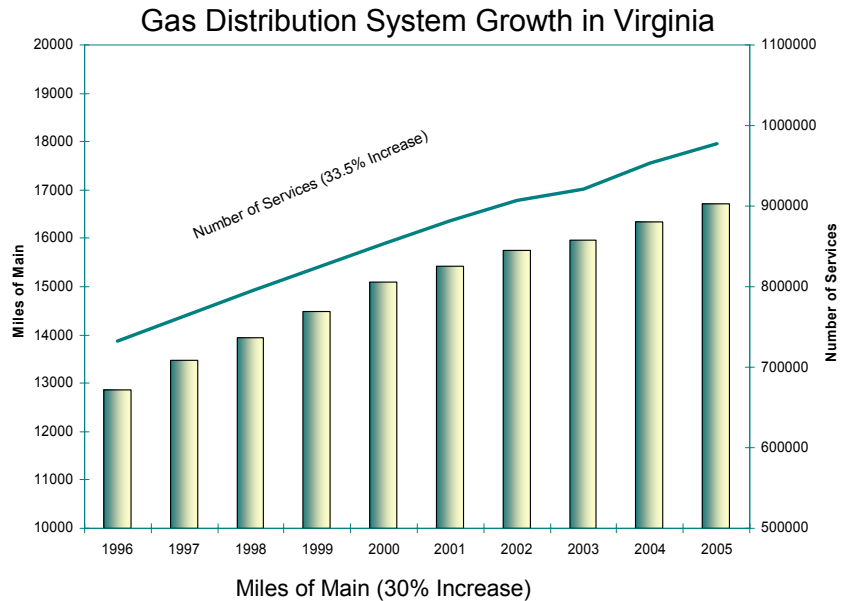
Locators are required to:

- Follow certain standards for marking underground utility lines; and
- Be trained based on their industry standards.

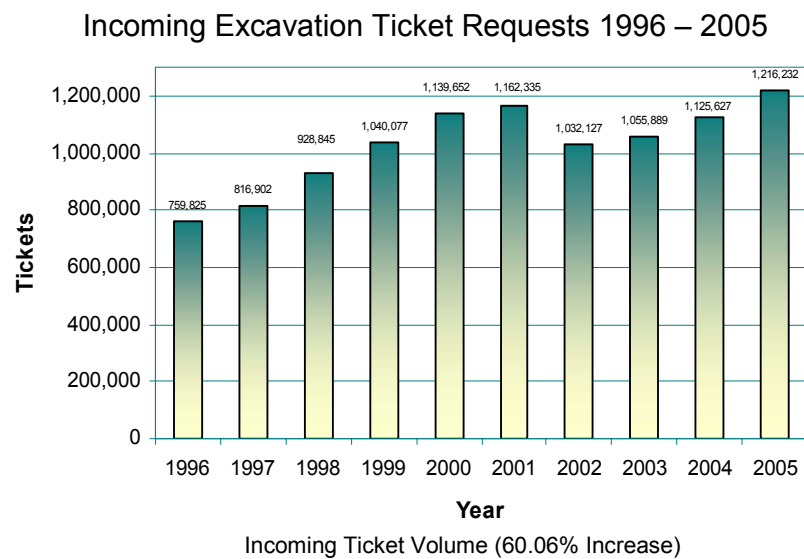
In order to effectively communicate these additional requirements to the stakeholders, the Commission formed a statewide education and training committee again comprised of representatives of key stakeholders. Every year, this committee recommends and the Commission adopts a statewide education and public outreach program. I will review the details of this program later in this testimony.

Results

Since 1996, when we began our mandatory reporting of all gas damages, Virginia's gas distribution system has grown by more than 30 percent.

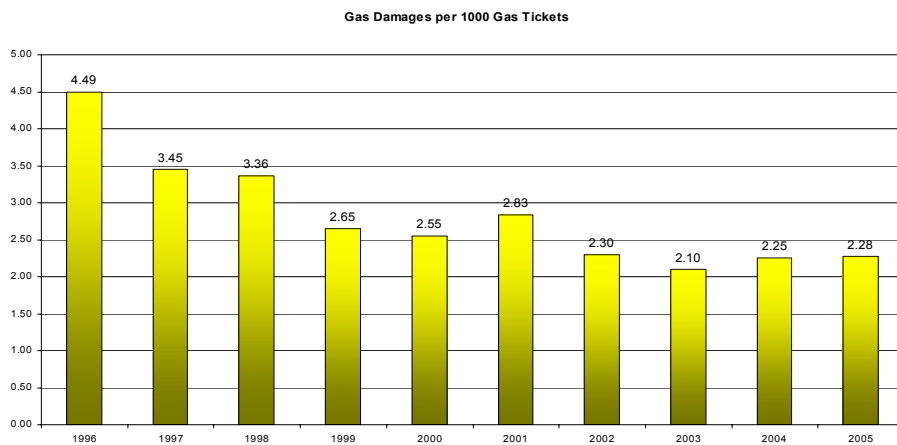


During this same period excavation notices also known as “tickets” has increased by more than 60 percent.



Finally, the index that is often used to measure the success of a damage prevention program, damages/1,000 tickets, for our gas system, has decreased from 4.49 in 1996 to 2.28 in 2005. This is a 50 percent reduction in excavation damage to gas pipelines in Virginia.

Statewide Gas Facility Damage Trend



A review of the previous three charts shows that although over the last 10 years, more gas facilities were constructed and needed protection from increased excavation activities, Virginia has managed to realize a significant reduction in gas damages. The success of this program can clearly be attributed to our comprehensive damage prevention program which has been based on the following:

- **Enhanced communication between operators and excavators.** The exchange of accurate and timely information between the excavators and operators of underground facilities is at the heart of any effective damage prevention process. The easier and the more efficient this communication, the more effectively the

two main stakeholders (excavators and operators) can communicate throughout the excavation activity. Virginia was the first state to implement the Positive Response System and require excavators to learn the status of their tickets by contacting this system before commencing excavation. Our “three hour notice” is another opportunity for excavators and operators to ensure they are “talking” when unmarked facilities are noted in the field. The requirement for the center to re-notify operators when they have failed to respond to the system is yet another way to ensure additional communication when a request for marking seems to have not been acted upon. Finally, the requirement for locators to add company specific letter designations and facility information when they mark the facilities is another way to better provide the excavators with information relative to a facility they need to protect from damage.

- **Partnership in public education.** As noted earlier, a committee of stakeholders currently guide Virginia’s public outreach program. Annually, this committee reviews a significant amount of data to determine the effectiveness of our education and outreach program and recommends to the Commission the specific elements of a new program for the upcoming year. Through this process, outreach campaigns of at least one million dollars per year have been implemented since 2001. To assist in training of stakeholders, the Commission has three full time trainers on staff who conduct face to face training for more than 3,500 individuals every year. Our utilities provide significant assistance in increasing the overall value of our educational campaign. For example, this year’s campaign is valued at more than \$3.2 million with approximately \$1.2

million dollars of free PSA's being provided by our cable and telecommunications companies. The gas operators have completed several unique initiatives such as having our safe digging message on a 2.5 million gallon LNG tank, on a building front, on gas meters, on gas pipeline markers, on company vehicles and bills, just to name a few. The annual campaign and the efforts of our partners keep our safe digging message in front of the public eye at all times.

- **Partnership in training of excavators, locators and one-call center employees.**

Effective training of those individuals involved in excavation, locating and marking of facilities and the notification center operation is also critical in reducing damage to underground facilities. In Virginia, most of our training is done by teams representing the stakeholders. Additionally, we have developed a "Train the Trainer" program to certify individuals to conduct training for their own employees or assist in training others. We also have an education credit program that encourages companies and individuals to get involved with educating their own employees or other companies' employees and receive credit to reduce possible future penalties.

- **Commission's role as a partner and facilitator.** As a result of our active damage prevention program, we have been presented with many different issues, the proper resolutions of which have been critical to the overall success of the program. When issues have required the involvement of all stakeholders, we have formed task forces, committees, etc. to quickly address these issues. Our Damage Prevention Advisory Committee, which meets monthly, has become the first place

where issues or concerns are discussed. These discussions have resulted in recommending revisions to the law, rules, procedures and policies. In all of these processes we have worked hard to ensure fairness to all stakeholders.

- **Efficient, fair and consistent enforcement.** As noted earlier, the results of investigations of damages and violations are reviewed by an Advisory Committee appointed by the Commission. The make up of this Committee is as follows:

<u>Representing</u>	<u>No. of Members</u>
Excavators	3
Operators	2
Utility Locators	2
Notification Center	1
Local Government	2
VA DOT	1
Virginia Board for Contractors	1
Commission Staff	1

After a review of the facts surrounding each incident, the Committee makes enforcement recommendations which may include: civil penalty, civil penalty with training, warning letter, letter of concern, or dismissal. Every recommendation is made by considering factors such as circumstances that led to the incident, culpability, gravity, history of the violator and other factors that may be justified. When civil penalties are necessary, a fairly complicated set of matrices guide the investigators and the Committee in recommending the appropriate level of civil penalties for settlement purposes while maintaining

consistency. If applicable, a performance improvement credit is applied to reduce the penalty and therefore recognize a stakeholder's overall performance. There are several opportunities for the involved parties to present their information and positions to the Committee outside a formal hearing. The Committee operates based on approved bylaws and strict policies to ensure the consistency and credibility of its process.

- **Use of performance measures for persons performing locating of facilities and constructing new utility facilities.** Quality assurance programs must be in place to monitor and ensure that locators perform their duties properly when they locate facilities. Also, contractors working for utilities must be monitored to ensure their full compliance as they mostly work around existing facilities. In Virginia, we have encouraged our operators to have incentives (penalties) tied to the performance of locators and utility contractors to further improve the operators' damage prevention programs.
- **Use of available technology to improve the process.** When a recent analysis of our data showed that damages caused by hand digging were on the rise, we encouraged our excavators to take advantage of air-knife technology and trenchless excavation using water to reduce these damages. When an operator had more than 30,000 unlocatable gas service lines, we encouraged that operator to use existing technologies to make their facilities locatable. Finally, our notification center has employed a number of technologies to improve its performance in providing timely service to excavators and operators. In three

months, the center will implement new mapping technologies to better serve its customers.

- **Continual review of data to help evaluate and improve the program.** Over the last 10 years, we have investigated more than 25,000 damages to our gas facilities. The cause of every single damage has been identified by our Committee of experts. For every incident, important information is gathered and maintained in a single database at the Commission. In addition, the notification center is required to capture and maintain data relative to every notice of excavation and every utility response to these notifications. The combination of these two data bases has allowed Virginia stakeholders to review the trends and to take appropriate and focused actions to improve the program. For example, data is used to effectively plan and implement the statewide education outreach program. Data is also used to share trends with our gas operators and devise plans to address problem areas.

Virginia Damage Prevention Pilot Project

Due to Virginia's mature and successful program, our state has been selected as a pilot state by a number of organizations, including the Common Ground Alliance ("CGA"), the Pipeline Research Council International, Inc. ("PRCI"), the Office of Pipeline Safety, and the various operators having facilities in Virginia. The purpose of this pilot project is to research and implement new and existing technologies such as GPS technology to further improve the communication of accurate information among

excavators, one-call centers and operators. The results of this pilot will benefit every states' damage prevention program.

Distribution Integrity Management

As you know, a recent study on integrity management for gas distribution systems was completed in December, 2005. This study was conducted by four joint government/industry groups. The Excavation Damage Prevention Group ("EDPG"), which I chaired, found excavation damage by far poses the single greatest threat to distribution system integrity. EDPG further found that comprehensive damage prevention programs were needed to significantly reduce accidents caused by excavation damage to pipelines. Further, the group found that federal legislation is needed to support the development and implementation of damage prevention programs that include effective enforcement as part of a state's pipeline safety program. States should be encouraged to incorporate pipeline damage prevention responsibilities with their pipeline safety programs. The costs associated with carrying out effective damage prevention programs along with resources needed to fund the current pipeline safety program, as well as implementing the recent safety mandates justifies increasing the 50 percent grant ceiling contained in the law to 80 percent. This funding level is consistent with other non-pipeline safety grants to states administered by USDOT. Any effort to significantly reduce excavation damage threats, which are the most preventable of all, is very much consistent with Congress's overall pipeline safety objectives. For any federal legislation to be effective, it must include provisions for additional grants to support the states' damage prevention and pipeline safety programs. We also support increasing the

current \$1 million Damage Prevention Grant to \$2.5 million dollars to assist all states with their existing damage prevention efforts. As I serve on the federal/state committee that helps to review the applications for the \$1 million, I know that a number of states' entire damage prevention program depend on this grant which has been very effective in supporting limited yet effective activities by these states.

Mr. Chairman, this concludes my testimony. Once again, thank you for the opportunity to participate in today's hearing.

Summary of Testimony

Virginia State Corporation Commission appreciates the opportunity to discuss our Underground Utility Damage Prevention Program. Over the last 10 years, we have managed to reduce excavation damage to our pipeline facilities by more than 50 percent. This is especially significant in light of the fact that our gas system has grown by more than 30 percent and the notices of excavation have increased by more than 60 percent over the same period. Our results are due to our comprehensive damage prevention program which includes the following elements:

- Enhanced communication between operators and excavators;
- Partnership in public education;
- Partnership in training of excavators, locators and one-call center employees;
- Commission's role as a partner and facilitator;
- Efficient, fair and consistent enforcement;
- Use of performance measures for persons performing locating of facilities and constructing new utility facilities;
- Use of available technology to improve the process; and
- Continual review of data to help evaluate and improve the program.

We encourage Congress to provide additional grants to states to assist them in better carrying out their increased pipeline safety responsibilities including the implementation of effective damage prevention programs. Specifically, we support increasing the current 50 percent pipeline safety grants to states to 80 percent and increasing the current \$1 million damage prevention grant to \$2.5 million to assist states with current damage prevention efforts.

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